

FEASIBILITY STUDY

FILE COPY
DO NOT REMOVE
FROM FILE

Henderson, US 1 Business
From US 1 Bypass to SR 1267
Vance County
R-2503

Prepared by
Planning and Research Branch
Division of Highways
N. C. Department of Transportation

Angela H. Smith
Angela H. Smith
Project Planning Engineer

R. G. Dawson, Jr.
R. G. Dawson, Jr., P. E.
Head of Feasibility & Special
Studies Unit

5/21/90
Date

L. J. Ward
for L. J. Ward, P. E.
Manager, Planning and Research

Henderson, US 1 Business
From US 1 Bypass to SR 1267
Vance County
R-2503

I. DESCRIPTION

This report covers a preliminary study of the proposed widening of US 1 Business to a multi-lane roadway from US 1 Bypass to SR 1267 in Henderson (see Figure 1). This project is included in the 1990-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection and is not currently funded. The total project length is approximately 3.0 miles.

II. PURPOSE OF PROJECT

Existing Route Characteristics

US 1 Business is classified as a major thoroughfare on the adopted Henderson Thoroughfare Plan. It is designated as an Urban Principal Arterial within the city limits, and as a Rural Major Collector outside the city limits on the County Functional Classification Plan. US 1 Business serves as a major connector between Henderson and the US 1 Bypass.

The studied section of US 1 Business is a 3-lane, 33-foot paved facility with variable 6 to 8-foot shoulders from Dabney Drive (SR 1267) to Welcome Avenue (SR 1138), and 2-lane, 22-foot paved facility from Welcome Avenue to US 1 Bypass. The existing right-of-way is 100 feet except for 60 feet between Elsie Street (SR 1210) and Belmont Drive (SR 1101).

The posted speed limit is generally 45 mph, but drops to 35 mph within the city limits. Development along US 1 Business is predominantly commercial north of Welcome Avenue, and mixed commercial and residential south of Welcome Avenue.

Traffic Volumes, Capacity, and Accident Record

The volume of traffic that utilizes this route is approximately 12,000 vehicles per day (vpd), and is expected to increase to an estimated 21,700 vpd by the year 2010.

The capacity of the existing road at a desirable level of service C under urban conditions is approximately 9000 vehicles per day. The present volume indicates that the capacity is exceeded along the entire studied length.

Accident data for a recent 3-year period shows a total of 94 accidents on the studied section of US 1 Business. This yields an accident rate of 336 accidents per hundred million vehicle miles, which is significantly greater than the statewide average of 188 accidents per hundred million vehicle miles for comparable rural US routes. Rear-end (28%) and angle (23%) collisions were the predominant accident types.

Need for Project

The improvement of US 1 Business is needed to upgrade the capacity and safety for existing and future traffic volumes.

III. RECOMMENDATIONS AND COSTS

The recommended cross section for US 1 Business is a 5-lane, 64-foot face to face curb and gutter section. It is recommended Welcome Avenue be realigned to match up with Belmont Drive and that St. Matthews Street (SR 1143) be closed and a connector built north of the St. Matthews intersection to facilitate traffic movement and improve safety at these intersections (see Figure 2). This cross section is consistent with the anticipated traffic volumes and the strip development located throughout most of the studied section. In general, widening should be accomplished symmetrically about the existing centerline.

Estimated right-of-way width used for cost estimating purposes is 100 feet.

The estimated costs of the recommended improvements are as follows:

<u>Construction Cost</u>	<u>Right-of-Way Cost</u>	<u>Total Cost</u>
\$4,050,000	\$1,720,000	\$5,770,000

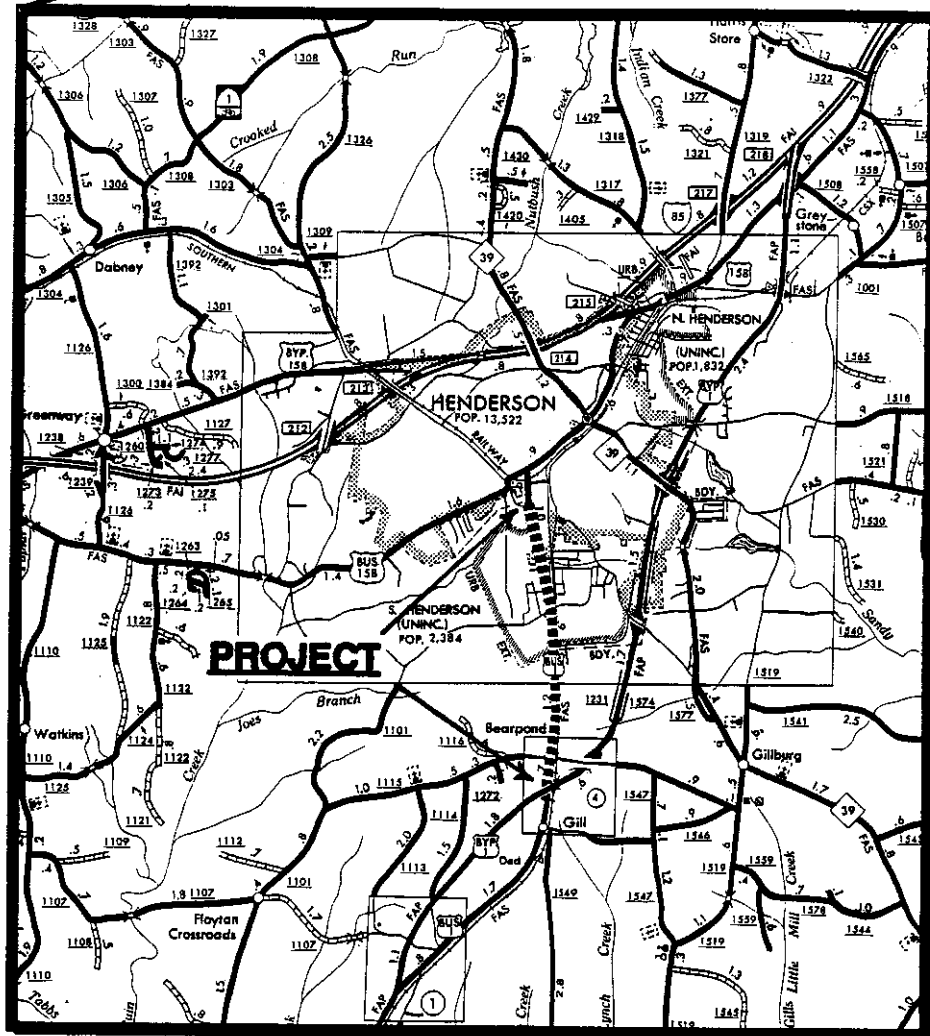
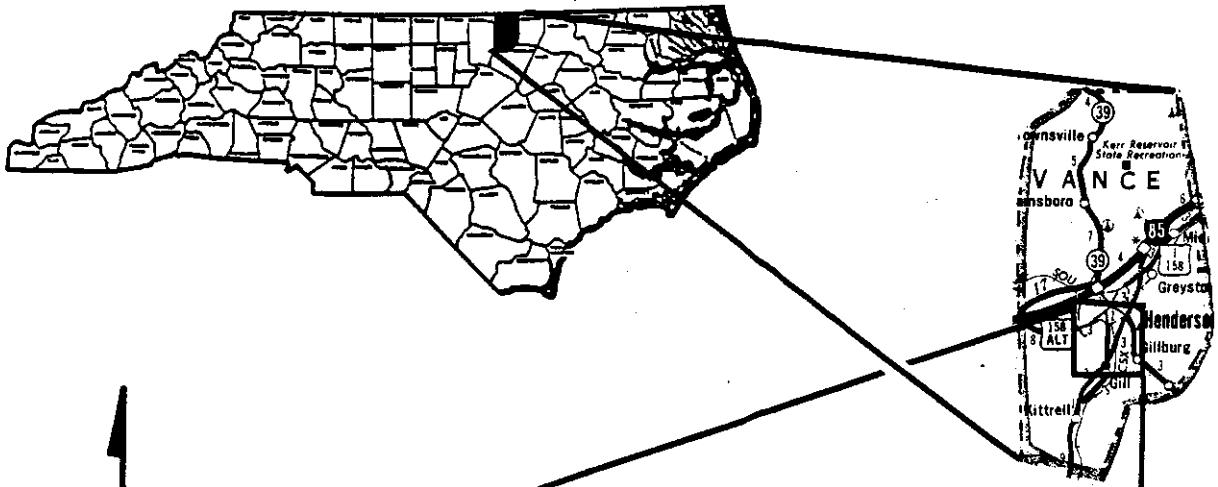
Cost estimates were prepared by the Preliminary Estimate Engineer and the Right-of-Way Branch.

IV. OTHER COMMENTS

Possible negative environmental impacts of the proposed widening of US 1 Business include the relocation of 6 residences and 3 businesses, land damage, and increased noise levels for remaining businesses and residences. Woodlands and wetlands are not expected to be impacted by implementation of this project.

If the project is to be implemented in the future, all feasible alternatives and their associated impacts will need to be evaluated in a planning and environmental document prior to that time, and a final decision made as to the most appropriate improvement.

AS/plr



**NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH**

VICINITY MAP

**HENDERSON, US 1 BUSINESS
FROM US 1 BYPASS TO SR 1267
VANCE COUNTY
R-2503**



FIG. 1

